

ninthly, of diseases of the bladder; tenthly, of diseases of the spleen; and, lastly, of diseases of the brain and spinal marrow.

"As the number of *elementary* lesions, like the primitive words of a language, is comparatively small, a knowledge of these lesions—which it is the object of the present work to convey—will greatly circumscribe the sphere of study and lighten the burden of memory. Drawings, also, while they greatly curtail the labours of those who enjoy unlimited opportunities, enable others, less fortunate, to acquire a comparatively extensive and well-digested knowledge of morbid anatomy." The most important feature in representations of morbid anatomy is fidelity. The author has, for this reason, in preparing those which accompany the work before us, "taken the precaution of never drawing without the specimen before him, representations from memory being generally inaccurate, and to obviate changes of colour from decomposition or exposure to air, he has usually completed the drawings within a few hours after the specimen was removed from the subject."

The arrangement of the work, as we have already stated, is according to organs, "as being best adapted to the study of the diseases of organs, but the lesions of each organ are considered in reference to the particular tissues which they occupy, on the principles of general anatomy."

The text of Dr. Hope being purely elementary, and his description and pathological views corresponding with those generally received, a critical examination of the several chapters may be dispensed with, while the character of the work is such as to preclude any attempt at analysis.

The additions to the text made by the American editor are judicious and in keeping with the plan and spirit of the original. Dr. Lawson has succeeded in obtaining very accurate fac-similes of the illustrations, by which the work is accompanied; the execution of which is but little inferior to those of the London edition. The execution of the work throughout does in fact great credit to its editor as well as publishers, and we trust that their very commendable enterprise may be rewarded by a ready sale of the correct and beautiful, and, at the same time, cheap edition they have presented to the profession of the very valuable treatise of Dr. Hope.

D. F. C.

ART. XVII.—*A Treatise upon the Diseases and Hygiene of the Organs of the Voice.* By COLOMBAT DE L'ISERE, Chevalier of the Royal Order of the Legion of Honour, Doctor of Medicine, Founder of the Orthophonic Institute of Paris, for the treatment of all vices of speech, diseases of the voice, &c. Translated by J. F. W. LANE, M. D. 12mo: pp. 220. Boston, 1845.

THE subject of the present essay is confessedly a most interesting one. The mechanism of the organs of voice—the physiology of speech—the various causes by which the human voice is impeded, disturbed, or destroyed, are points which claim a much greater share of attention on the part of the physician than they have as yet received. It is true that every defect of voice, and every vice of utterance may not depend upon lesions of the organs concerned in its formation, of a strictly pathological character, or which we may have it in our power to prevent or remove; still, all our attempts to perfect the human voice—to remove its defects, and to develop in it the full extent of compass and of harmony, of which it is capable, must be based upon an acquaintance with the structure and vital laws of the apparatus by which it is formed—the manner in which this apparatus is influenced by external agents and modes of life, and the effects produced upon it by the diseases that may affect it either primarily or secondarily. The study of the voice, therefore, not merely affords many subjects of curious and interesting inquiry, but it is one of no trifling importance, inasmuch as by it alone we can determine the means, whether hygienic or therapeutical, calculated to secure to man the perfect and pleasing exercise of one of the most noble of his functions of relation.

In the essay before us, we are presented with a short description of the vocal organs—followed by an inquiry as to the true physiology of voice and speech.

The difference of the voice in the two sexes and at the different periods of life, is pointed out; its modification from modes of life, occupation and other circumstances is next referred to; the influence of the passions upon the voice and the difference of the vocal timbre according to the moral qualities and inclinations of the individual are briefly considered, together with the inflexions of the voice with regard to climate and nation. These, with a brief notice of the difference between the articulated and modulated voice, and the extent and harmony of the voice in music, are the subjects treated of in the first and second chapters.

The third chapter treats of the various theories that have been advanced to explain the mechanism of the voice—with an exposition of their errors and defects. M. Colombat, from various considerations which he has detailed in this chapter, was led to doubt the assertions of physiologists, which so repeatedly contradict each other, in relation to the mechanism of the voice, and he

"Could not conceive why they have always had such a rage to compare the mechanism of the larynx to that of the different musical instruments; it seems to him, on the contrary, that it would be more natural to compare these latter to the larynx, which is the most ancient and harmonious of all instruments. I say, then, he adds, that the larynx resembles nothing but a larynx, and that the admirable organ of the voice is a wind instrument, *sui generis*, inimitable by art, and the living mechanism of which cannot be compared to that of any other, because the principles of the animal organization can never be communicated to a mechanical instrument, and because man will never have at his disposal the elements of vital action.

"But, I shall be asked, since you do not admit the theories of physiologists, what explanation will you give of the formation of the voice? First, I shall reply, that I do not pretend to give explanations more mathematical than other persons, but simply, that the glottis is the instrument that produces the sounds, or rather, it is the air driven out from the lungs, which, under the influence of the will, by breaking against the lips of the glottis, produces sonorous undulations, modified by the pharynx, the tongue, the lips, the nasal fossæ, finally, by the entire vocal apparatus. I think, the formation of the vocal sound can be conceived of without having need of sonorous cords or vibrating reeds, and the production of the voice, and its different modifications may, indeed, be the result of a large or small opening of the glottis, caused by the contractions or relaxations of its lips. Everybody knows, too, that the constriction alone of the lips expresses, by whistling, varied, and even harmonious sounds, and that the air, and different gases may be expelled from the body of animals, with certain modulations, from openings, where, so far as I know, the existence of a *reed* or of *vocal cords* has never been suspected."

The fourth chapter treats of the Pharyngean or *Faucette* voice. This voice is produced, according to M. Colombat, by a new glottis formed by the simultaneous approximation of the organs of the glottis, as follows:—

"1st. Inferiorly, the summit of the larynx and the base of the tongue; 2d, the pharynx, or posterior wall; 3d, the columns and tonsils at the sides; 4th, the veil of the palate, and the uvula, which, by their elevation, prevent the air from issuing by the nasal fossæ, as in the chest voice. When all these parts are approximated by the contraction of the muscles, the *bucco-pharyngean* cavity forms a cone, the base of which corresponds to the opening of the mouth."

The whole of the author's remarks on the *faucette*, or, as it is more often, but according to him, erroneously termed, the *fulsette* voice, are in the highest degree interesting.

The subject of singing, or vocal music, is next considered—its powers and influence generally, are pointed out—and the hygienic advantages to be derived from its exercise, briefly alluded to.

"The first of these advantages is the better development of the chest, and the strengthening of the vocal and respiratory organs, at the same time that our animal economy experiences the happy effects of an exercise filled with charms, and which exerts its sweet influence over our feelings and ideas."

All our readers are aware of the remedial virtues ascribed to both vocal and instrumental music by the older physicians. M. Colombat would appear also to form no mean estimate of its curative powers.

"In union with music," he remarks, "it often produces great effects upon the

nervous system, and may be made the means of cure in many nervous diseases.” “The moderate exercise of singing may be advantageous in those affections with which the imagination is much occupied, such as dyspepsia, and gastro-enteralgia; by serving as a means of distraction, and dissipating the idea of the diseases, it will be made to disappear in part. A great many facts prove that singing, joined to music, is also very favourable in certain epidemics, *especially as a protective measure*, and the observations we have just made during the epidemic of the cholera, prove to us that those who were occupied with singing and music have but rarely been attacked by this terrible scourge.” In a note the author remarks further:—

“In epidemics and other scourges of this kind, such as the cholera and the plague, which desolate an entire country, many persons fall victims to terror rather than disease. Reason and observation equally prove how useful singing would be to them, since it has always the property of dissipating their terror. It often happens that the mind, constantly occupied by the fear of the disease, calls for it, so to speak, and gives it birth. *Diemerbroeck*, in his treatise on the plague, cites several cases cured by singing and music. *Pigray*, who says that sadness and fear are the nourishment of the plague, also cites several observations of the same kind. *Desault*, too, declares that singing is advantageous in the treatment of insanity and consumption.”

The chapter contains, also, a reference to the disorders resulting from the undue exercise of the vocal organs in singing—and the manner in which they are produced. It is a subject upon which we regret that the author has not entered into more full details.

Ventriloquy, its nature and mechanism, are shortly noticed. The author, who himself possessed the power of “closely imitating the voice of the ventriloquists,” and only wanted “a certain degree of skill, and the facility so predominant among them of imitating all the vocal inflexions, to produce all the illusions of their art,” remarks, in regard to the mechanism of ventriloquy, as it is improperly termed, as follows:—

“When it is my intention to speak with the voice of the ventriloquists, I employ the following mechanism:—at first, after having made a deep inspiration, the object of which is to introduce into the chest the greatest possible quantity of air, I strongly contract the veil of the palate, in order to elevate it so as completely to close the posterior orifice of the nasal fossæ. At the same time, I take equal care to contract the base of the tongue, the pharynx, the larynx, the columns, the tonsils, while I fix the point of the tongue behind the teeth of the upper jaw, and apply the dorsal face of this organ against the palatine vault. I cause the emission of my voice to be made with the expulsion of the least possible quantity of air from the lungs, and I easily obtain this result by forced contractions of all the muscles of the abdomen, chest, and neck.

“The principal secret of the ventriloquists then seems to be, to prevent the air from issuing by the nose, and to compel this fluid to escape by the mouth in a slow and forced manner. The voice is thus rendered hoarse, and seems to have the weakness and timbre, as if it were from a distance. To increase the deception, by giving to the voice a sound which seems to come from a determinate spot, it is sufficient adroitly to direct the attention to this spot, and afterwards to speak in that direction, by elevating in a greater or less degree the veil of the palate, so as to render the voice distant, or near, as the wish may be. The effort must also be made to speak with the least possible movement of the lower jaw, and to be careful to articulate in some sort with the mouth closed; finally, the ventriloquist should present his profile as often as he can, that his countenance may appear more at rest, and as destitute of expression as a blind man’s; he will thus appear to take no part in the vocal sounds which are heard, and will easily succeed in producing a more complete illusion.”

The chapter closes with some remarks on the mechanism of the cry, and the difference in its intonation according to the difference in the pain or emotion by which it is produced.

The fifth chapter treats of aphony and dysphony. These affections of the voice the author describes as of four species,—

"*First.* Idiopathic cases of aphony and dysphony, arising from a physiological, anatomical, or traumatic lesion of the vocal organs."

The causes of this species are, inflammations of the larynx, trachea, bronchi, fauces, tonsils, uvula, and veil of the palate; œdema of the glottis; laryngeal phthisis; thickening of the pharyngo-laryngeal mucous membrane; atony, paralysis, or spasm of the muscles of the pharynx and larynx; elongation of the uvula; division of the veil of the palate and palatine bones; wounds or contusions of the larynx and trachea, or an opening situated below the glottis; section or lesion of the laryngeal and pneumogastric nerves, and, we may add, certain adhesions of the arches of the palate occurring subsequently to operations upon the tonsils previous to puberty.

"*Second.* Aphony and dysphony, symptomatic of certain diseases which affect the whole economy."

This species may result from adynamic and ataxic fevers, certain verminose affections, pulmonary phthisis, aneurism of the aorta when it compresses the left recurrent nerve; lesions of the spinal marrow, excessive distension of the stomach, apoplexy, hemiplegia, anemia, general weakness, convulsions, epilepsy, hysteria, catalepsy, chorea, insanity, cholera, frenzy, acute moral affections, the abuse of ardent spirits, and the effects of certain poisonous and narcotic substances.

"*Third.* Sympathetic aphony and dysphony, depending upon the reaction which results from a pathological condition of certain organs more or less remote, and having no immediate relation with the vocal apparatus."

These may be caused by prolapsus or enlargement of the womb, or polypus in its cavity or ulceration of its neck, pregnancy, disturbances of the menstrual function, swelling or inflammation of the testicles, chronic hepatitis, derangement of the portal system, atony of the *primæ viæ*, suppression or diminution of a natural or artificial discharge, a sudden or too long-continued suppression of perspiration, especially of the feet.

"*Fourth.* Specific aphony and dysphony, resulting from a primitive or consecutive remote affection, which has been conveyed to the vocal organs."

These may be caused by syphilis, scrofula, scurvy, rheumatism, gout, psoriasis, herpes, and nearly all the exanthemata, and by certain effects resulting from the injudicious use of iodine and mercury.

In this classification, the cases of aphony and dysphony resulting from affections of the brain either acute or chronic, which are of frequent occurrence, are not noticed. According to the observations of M. Bellhomme, recently communicated to the French Academy of Medicine, lesions of the faculty of speech are produced by disease or injury of the anterior lobes of the brain, or by some derangement of the organs of communication between the brain and those concerned in articulation.

Chapters six, seven, and eight, treat of chronic enlargement of the tonsils, of prolongation and prolapsus of the uvula, and of chronic inflammations of the larynx and trachea, and of primitive laryngeal phthisis, and their treatment.

In the chapter on sympathetic aphony and dysphony, M. Colombat has adduced a number of facts to prove the sympathetic relationship which exists between the sexual organs and those of the voice, and the effect upon the voice of various pathological conditions of the sexual organs in the male and female.

The account of the various diseases by which the voice may be affected is very brief. We notice nothing in what the author has presented in regard to their pathology and therapeutics which calls for particular comment. His views are, in general, correct, though we cannot perceive the necessity, in a work of the character of the one before us, of entering any further into their consideration than is necessary to point out the manner in which they disturb the function of speech and the extent of the disturbance produced by each. To do anything more, would demand a treatise that would embrace the consideration of a large portion of the more important diseases to which the human organism is liable.

The work of M. Colombat closes with a chapter on the hygiene of the voice.

There is much truth in the following remarks:—

"The development of the voice requires the most serious attention, and the vocal education should be commenced in infancy, by seeking, with all possible care, to obtain for an organ so admirable and precious, all the modifications of

which it is capable. From the first, the attention should be primarily directed to the development of the articulated voice, in order to impress in season upon the flexible and elastic organs of the child, the custom of performing those regular motions, which are indispensable to acquire, at the same time, a sonorous voice, a pure pronunciation, and natural and easy inflections. This happy result may almost always be attained by exercising, at an early period, the children, either in speaking or reading aloud; but so as never to compel them by too great a prolongation of this exercise, or allowing them to take a tone too high or too low to tire or strain the vocal organs. They should be forbidden every sort of vocal display or forced cry, and thus their vocal organs, so easily modified at this age, prevented from assuming a harsh or sharp timbre, often too high, and very disagreeable to the ear. They should also be made to pronounce carefully all the syllables, [giving to each its proper quantity and accent,] and so to govern their voices as to make every period of a phrase perceptible. They should also avoid respiring too often, and too suddenly, which may give rise to a sort of hiccup, which not only may have the inconvenience of being ridiculous, but which may often even cause an irritation of the mucous membrane of the vocal cord, and produce an habitual hoarseness, sometimes difficult to overcome."

We commend the essay of M. Colombat to the notice of our readers, not from a belief that in it they will find all the information in regard to the physiology, pathology, and hygiene of the voice, they may desire, but because it is calculated to direct the attention of physicians to an all-important subject that has heretofore been too much neglected, and in relation to which we possess no treatise of any real value. The essay before us is far too concise to present anything approaching to a satisfactory view of the various questions embraced in it—many points equally important with those glanced at by the author, are entirely overlooked—while the chapters devoted to the pathology and the therapeutics of those diseases which either directly or indirectly alter or disturb the voice, are far too deficient in the necessary details to be of advantage to the practitioner—while the unprofessional reader they are only calculated to mislead. Nor is the chapter on the hygiene of the voice one of the leading objects, according to its title-page, of the essay—less exceptionable—the few remarks it contains are sensible enough, but it is very far from containing a full exposition of the causes calculated to injure the voice and the means by which these may be guarded against—while the directions given for developing its powers, accuracy, and harmony, are vague and imperfect.

D. F. C.

ART. XVIII.—*Die gallige dyscrasie (Icterus) mit acuter gelber atrophie der leber.* Von PAUL JOSEPH HORACZEK, Doctor der Medicin, magister der augenheilkunde und der geburtshülfe, gewesenem assistentem an den lehrkanzeln der speciellen pathologie und therapie, und der medicinischen kliniken an der k. k. Universität in Wien, mitgliede der medicinischen facultät. 8vo: pp. 145. Wein, 1844.

*The bilious dyscrasia or icterus, with yellow atrophy of the liver.* By PAUL JOSEPH HORACZEK, M. D., Master of Ophthalmologia and Obstetrics, formerly Assistant to the Professor of Special Pathology and Therapeutics, and to the Medical Clinic of the Royal University of Vienna, Member of the Medical Faculty. Vienna, 1844.

THE author of the present work has presented a very minute account of what he denominates "the most important form of the bilious dyscrasia," and which he considers as a primary or idiopathic disease of the blood, in consequence of which it is no longer in harmony with the nervous life of the organism, and which is invariably accompanied by an acute atrophy of the liver. Dr. Horaczek is of opinion that most of the cases of acute jaundice and many of those described as hepatitis, bilious fever, cephalopathia cholotica, pylophlebitis, &c.—are in fact cases of this disease; of this he is fully convinced, as well by numerous clinical observations of his own, in which the symptoms during life were compared with the morbid appearances presented upon dissection, as by repeated observations made by other physicians.